

Remarks

In accordance with the foregoing, claims 9-20 are pending and under consideration.

Favorable reconsideration of this application, in light of the following discussion, is respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

In the outstanding Office Action, claims 9-20 are rejected under 35 U.S.C. §103 as allegedly being unpatentable over “Foschini” (U.S. Patent App. Pub. No. 2002/0142723) in view of “Walton” (U.S. Patent App. Pub. No. 2004/0081131).

This rejection is respectfully traversed.

Claim 9, for example, recites “dividing data for transmission into a plurality of elements such that the number of data elements corresponds to the number of subcarriers.” The Examiner indicates that this feature of claim 9 is disclosed in Foschini. However, this is submitted to be incorrect. Foschini, as relied on by the Examiner, merely discloses that data is divided into streams and that these streams cycle through different antennas, presumably until the data is completely transmitted. However, there is no indication in Foschini that the number or streams (or elements) is equal to the number of antennas. Thus, it is submitted that Foschini does not teach this feature of claim 9 as indicated by the Examiner.

Furthermore, claim 9, for example, recites “for each antenna, assigning each element to a subcarrier for transmission, such that for at least two antennas and at least one subcarrier, different elements are assigned to said one subcarrier.” The Examiner, at page 3 of the Office Action, acknowledges that Foschini does not teach two antennas transmit different elements on one subcarrier. The Examiner attempts to make up for this deficiency in Foschini with Walton and states that “Walton teaches two antennas transmits two elements on a subband.” However, it is submitted that the Examiner has incorrectly applied the disclosure of Walton and that Walton fails to make up for the deficiency in Foschini as indicated by the Examiner.

More specifically, the Examiner appears to be incorrectly using the terms subband and subcarrier interchangeably. However, one of ordinary skill in the art would clearly appreciate the difference between the terms subband and subcarrier in the context of OFDM. In OFDM, an OFDM carrier signal is the sum of a number of orthogonal sub-carriers. Walton discloses that with OFDM, each subband is associated with a respective carrier that may be modulated with data. As such, Walton merely discloses that two elements are sent using the subbands and does not disclose that these two elements are sent on the same subcarrier because they could

be sent on any of the subcarriers of such a subband. Thus, in contrast to the Examiner's allegation, Walton is silent with respect two antennas transmitting different elements on one subcarrier. As such, Walton does not teach "for each antenna, assigning each element to a subcarrier for transmission, such that for at least two antennas and at least one subcarrier, different elements are assigned to said one subcarrier," as recited in claim 9 and, therefore, fails to make up for the deficiency in Foschini with respect to claim 9.

Independent claim 13 recites "for each antenna, assigning each element to a subcarrier for transmission, such that for at least two antennas and at least one subcarrier, different elements are assigned to said one subcarrier" and independent claim 20 recites "assignment means for assigning each element to a corresponding subcarrier, the elements being assigned individually for each antenna such that for at least two antennas and at least one subcarrier, different elements are assigned to said one subcarrier."

Thus, for at least the reasons discussed above, claims 9-20 patentably distinguish over the combination of Foschini and Walton. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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